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VICTORY ON THE FARM FRONT

THE

AGRICULTURAL

SITUATION •

AUGUST 1942

A Brief Summary of Economic Conditions

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The Farmer Comes Through

MID YEAR CROP AND LIVESTOCK REPORTS show strikingly the great part that our farmers are playing in World War II. They show without exception that despite mounting difficulties in obtaining the materials and manpower needed in the production of agricultural commodities, the farmers are cultivating record acreages of oil crops, large acreages of food and feed crops generally, and producing a record volume of meats, dairy products and poultry products this year. The Secretary of Agriculture stated upon publication of the midyear crop report:

American farmers may well be proud of the tremendous production of food and fiber indicated by the July crop report. Barring unforeseen difficulties they will make 1942 a year of record production. They are meeting production schedules despite some labor shortages, some unfavorable weather and other difficulties. * * * Each day the part that food must play in the winning of the war becomes more apparent.

GREATEST FARM VICTORY is in offsetting the loss of imports of vegetable oils. Acreages of oil crops—peanuts, soybeans, flaxseed—are a sensationally high record this year, and the production of animal fats will make a new peak. Important byproduct of the oil crops is high-protein feed, and the volume this year will supplement greatly our feed supply for the production of record totals of meats, milk, eggs, and other animal products. Add to these the near-record quantities of fruits and vegetables, and the total food production for civilian, military, and Lend-Lease combined will bulk probably 9 percent larger than in 1941, and 25 percent larger than the 1935-39 average. Goals for 1942 called for a 6-percent increase in total agricultural production—the farmers will make 9, if all goes well with the condition of the crops and livestock between now and harvest.

FOR several months past, the Bureau of Agricultural Economics has been studying agricultural production possibilities in 1943. Competent analysts believe that larger production will become increasingly hard to get as greater difficulty is encountered in obtaining the implements of production—the machinery and manpower, fertilizer and production supplies of all kinds.

Much less steel will be available for farm machinery next year, possibly less than half the quantity allotted for 1942. * * * Some 4 or 5 million more men may be called in the year. It is inevitable that many young farmers and farm laborers will be in this group. Some of them will be replaced by women, children, old folks, and other less experienced help; but even if numbers of farm workers are fairly well maintained, the total efficiency is almost sure to decline.

Farmers may have difficulty in obtaining enough nitrogenous fertilizers, and the shortage must be offset by increased plantings of winter legumes, greater utilization of manures, perhaps by use of oil-seed meals as fertilizers, and by priorities on use of available supplies. Overtaxing of transportation, warehousing and processing facilities may further increase the difficulties confronting farm producers in 1943.

EVERY so-called commercial farm is probably in full cultivation this year—and there are few idle acres. The total area of principal crops for harvest in 1942 is more than 340 million acres, as compared with 332 million acres harvested in 1941, and with 332 million average for the ten years 1930-39. To be sure, opportunity exists on many small farms to increase the production of food, but such increases are mainly in the direction of providing more food for the people on these farms.

New records have been made in per acre yields of crops and per unit yields of livestock the country over during recent years, but it is not reasonable to expect such gains can be continued indefinitely. Nature has been kind, but a bad growing season would speedily check the rising trend of total agricultural production. Parenthetically, more than a little concern has been felt this year as to the possibility of adverse weather conditions; as this statement is written in early August, it is fully realized that many crops—the corn crop in especial—have yet to go through a critical season of growth.

IN striving to achieve a higher peak of agricultural production in 1943, the paramount need is for food and fiber for military use at home and abroad on all united fronts. Possibly,

after satisfying these extraordinary requirements there may be some tight situations with regard to the supplies available for civilian use. Supplies may bulk large in total, but there may be shortages of some foods and surpluses of others. It is conceivable that in order to safeguard the health of our people on the home front rationing programs may have to be extended.

Of vital concern is the maintenance of adequate nutrition among our own civilians. Our national standards are high in comparison to those in other countries; nevertheless, many deficiencies have been brought to light through the selective service. We cannot hope to make much larger supplies of food available for domestic civilian consumption during the war. Rather, we shall have to do everything possible to obtain better nutrition from improved handling of the foods we now have.

THE Department of Agriculture expects in coming weeks to develop for the guidance of farmers

an over-all production program designed to meet the extraordinary wartime requirements for food for civilian and military use and for Lend-Lease export, in 1943; but a program which must take into consideration the limitations and possibilities of our land resources and the limitations imposed by our diminishing production supplies. This over-all program will be subdivided into regional and area programs organized to suit the physical and economic conditions within regions and areas, and to indicate the desirable and possible shifts in production. Much as last year, National goals, developed by the nation's foremost agricultural specialists, will be broken down into State, county, and individual farm goals to provide informed and intelligent direction of voluntary action by 6 million farm operators engaged in the production of literally hundreds of different farm commodities—the kind of guidance that is essential to enable agriculture to assert its full strength towards victory.

H. R. TOLLEY.

Commodity Reviews

PRODUCTION: Banner Year

FARMERS have put in for harvest this year the biggest acreage of principal crops since 1932—more than 340 million acres. This compares with 332 million in 1941, and with 332 million average for the 10 years 1930-39. Nearly half the total acreage for harvest is in the four principal feed grains (corn, oats, barley, grain sorghums)—153 million acres, as compared with 147 million in 1941, and with 153 million average for 1930-39.

Biggest increases this year over last are in oil crops (peanuts, soybeans, flaxseed), acreages of these totaling 22.9 million, as compared with 15.1 million in 1941, and with 8.8 million average for 1930-39. Cotton is increased by nearly 1 million acres;

smaller increases are shown for rye, rice, hay, dry beans, dry peas, potatoes, tobacco, sugar cane, sugar beets, and sorgo for syrup. Biggest decrease is in wheat, acreage for harvest totaling 50.6 million as contrasted with 55.8 million in 1941, and with 55.9 million average in 1930-39.

Crop conditions in July promised unusually good yields this year, averaging higher by 3 percent than in any July during the past 4 years. Fulfillment of this promise suggested that the total out-turn of principal crops may exceed last year's by 3 percent, and come close to the all-time high in 1937 when cotton production was unusually large. The Crop Reporting Board summed up the outlook: "A banner year for crops and livestock appears in the making."

The Crop Board added: "Present prospects are particularly favorable in the Great Plains in contrast to the recent drought years. In the 10 Great Plains States, production of small grains is expected to total about 29 million tons compared with 9 million in 1934, and a 10-year (1930-39) average of 18 million tons. Over most of this area the scars which the repeated droughts left on the land and on the people are disappearing."

DEMAND: Big

Food requirements for civilian, military, and Lend-Lease export continue to increase. The rising demand for agricultural products is reflected in firm markets, in prices at relatively high average levels, in prospects that cash farm income this year will be close to the largest on Government record. Costs of farm production also are up—possibly to an all-time high—principally on account of the biggest farm payroll in many years.

Net farm income will be larger this year than last, making surplus available for the payment of debts and increased Federal income taxes, and for the purchase of War Bonds. Farm debt (mortgage debt plus short term loans by banks and Federal agencies) totals a little more than 9 billion dollars. Farm debt has increased slightly during the last 2 years but is much smaller than the all-time high of 14 billions in 1922. Interest rates also are considerably lower than at that time.

Indicative of the response of farmers to wartime requirements for increased production is the fact that production of milk and eggs this year will be the largest on record, that hog slaughter under Federal inspection is expected to be 20 percent larger in 1942-43 than in 1941-42, and that cattle marketings will be considerably larger during the remainder of this year than during the like period of 1941.

Increased production of fats and oils will go far toward making up for reduced imports, production of vege-

tables for consumption as fresh and processed foods will exceed the 1941 output, and the production of fruits will be a near-record this year. Total food production should be larger than ever before.

PRICES: Higher

Average of prices received by farmers advanced 3 points during the month ended July 15: average of prices paid was unchanged. On the up side of prices received were live-stock and livestock products, cotton, and truck crops. Farm wage rates were the highest since 1920. Farm commodities selling above parity on July 15 included potatoes, cattle, calves, hogs, lambs, wool, eggs, chickens and butterfat; below parity were cotton, wheat, and corn.

Bureau of Labor Statistics reported a rise of 1.3 percent in retail prices of food during the first month of broadened price control—May 15 to June 15. This was the same rate of advance prevailing since March 1941, but it was the result largely of higher prices on commodities not covered by ceilings—principally apples, oranges, and lamb.

Average of prices received by farmers is expected to continue at approximate parity during the remainder of this year.

WAGES: High Level

Farm wage rates—more than double the 1910-14 level—are the highest in 22 years. National average of farm wages per month with board was \$47.29 in July, compared with \$36.45 a year earlier, and with \$22.09 annual average for the period 1910-14. Farm wage rates have been rising since the beginning of 1940, but sharply through 1941, and from April to July this year the rise was five times the usual seasonal advance. Highest wages are being paid in the Pacific, Mountain, and New England States; lowest in the East South Central and South Atlantic.

The supply of experienced farm labor is the smallest in 32 years of

Government record. The total number of persons employed on farms is about the same as in 1941, but much

Index Numbers of Prices Received and Paid by Farmers

Year and month	Prices received	Prices paid interest and taxes	Buying power of farm products ¹
1941			
January.....	104	128	81
February.....	103	128	80
March.....	103	129	80
April.....	110	129	85
May.....	112	130	86
June.....	118	132	89
July.....	125	133	94
August.....	131	136	96
September.....	139	138	101
October.....	139	141	99
November.....	135	143	94
December.....	143	143	100
1942			
January.....	149	146	102
February.....	145	147	99
March.....	146	150	97
April.....	150	151	99
May.....	152	152	100
June.....	151	152	99
July.....	154	152	101

¹ Ratio of prices received to prices paid, interest and taxes.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average, August 1909-July 1914	July average 1910-14	July 1941	June 1942	July 1942	Parity price July 1942
Wheat (bushel).....cents..	88.4	86.2	85.6	95.7	94.6	134.4
Corn (bushel).....do.....	64.2	70.1	69.6	81.9	83.1	97.6
Oats (bushel).....do.....	39.9	40.9	32.7	46.5	43.9	60.6
Rice (bushel).....do.....	81.3	-----	¹ 111.0	171.1	169.5	123.6
Cotton (pound).....do.....	12.4	12.7	14.32	18.26	18.55	18.85
Potatoes (bushel).....do.....	69.7	81.5	¹ 73.9	111.1	125.8	² 103.1
Hay (ton).....dollars..	11.87	11.78	7.66	10.00	9.05	18.04
Peanuts (pound).....cents..	4.8	5.1	4.16	5.51	5.59	7.30
Apples (bushel).....dollars..	.96	.86	.95	1.66	1.52	1.46
Hogs (hundredweight).....do.....	7.27	¹ 7.35	¹ 10.32	13.39	13.78	11.05
Beef cattle (hundredweight).....do.....	5.42	¹ 5.54	¹ 8.73	10.75	10.79	8.24
Veal calves (hundredweight).....do.....	6.75	¹ 6.75	¹ 10.23	12.43	12.56	10.26
Sheep (hundredweight).....do.....	4.53	¹ 4.60	¹ 4.69	5.65	5.53	6.89
Lambs (hundredweight).....do.....	5.88	¹ 6.12	¹ 9.47	11.99	11.82	8.94
Butterfat (pound).....cents..	26.3	23.5	36.6	37.4	37.5	³ 37.4
Milk, wholesale (100 pound).....dollars..	1.60	1.38	¹ 2.16	¹ 2.35	2.40	³ 2.26
Milk, retail (quart).....cents..	6.8	6.8	10.7	11.7	11.7	10.3
Chickens (pound).....do.....	11.4	12.2	16.8	18.5	18.7	17.3
Eggs (dozen).....do.....	21.5	16.7	26.6	27.4	29.5	³ 29.4
Wool (pound).....do.....	18.3	17.5	¹ 36.1	39.7	39.2	27.8
Tobacco: ⁴						
Maryland types 32.....do.....	22.9	-----	35.0	30.0	31.0	21.8

¹ Revised.

² Post-war base.

³ Adjusted for seasonality.

⁴ Retailed by farmers directly to consumers.

⁵ Base price crop years 1919-29.

of it consists of inexperienced help. Even so, high records of farm production are being established this year as every mechanical aid and short cut are being used to attain wartime food production goals. Probability is that total agricultural production this year will be 9 percent larger than in 1941, and 25 percent larger than the 1935-39 average.

SERVICES: No Ceiling

Charges for services rendered on a farm in connection with the planting, cultivating or harvesting of crops, the raising of livestock or poultry, or their preparation for market have been freed from price ceiling by the Office of Price Administration. Farm services excepted from price regulation are primarily seasonal services. Many were not performed in March, the base pricing period, and many others are services customarily performed by one farmer for another.

Maximum price regulations still apply, however, to services performed by

commercial operators off a farm. Thus, price ceilings apply to the butchering of livestock at a commercial plant not located on a farm and to the ginning of cotton and the grinding or milling of grain performed by commercial operators off a farm. Ceilings apply also to rates for trucking farm products, warehousing charges, and fees of tobacco auctioneers. Services performed on farm buildings—such as re-roofing a barn, the repair of plumbing in a farm house, or the repair of farm machinery, are all subject to price ceilings.

Examples of the services excepted when performed on a farm are: Plowing, discing, planting, drilling, cultivating, fertilizing, spraying, dusting, fumigating farm crops, baiting, treating seed, cleaning seed, butchering, threshing, combining, baling hay or straw, husking corn, silo filling, shredding, shelling corn, cane milling, buzzing wood, saw milling, clover hulling, crushing limestone, cattle clipping, sheep shearing, dipping, pruning and grafting, tiling, ditching, terracing, dam building, potato digging, peanut digging and picking, cotton picking, mowing, binding, cutting, grinding hay and grain, contract crew work, and contract feeding.

FEED SUPPLY: Ample

The supply of feed grains will be ample for 1942-43 requirements, but the carryover at the end of the year will be the smallest since 1937. In 1941-42 the supply of 4 feed grains (corn, oats, barley, and grain sorghums) totaled 130 million tons, domestic disappearance 110 million tons. In 1942-43 the supply is expected to total 131 million tons and domestic disappearance may be 121 million tons. Supplementing the 1942-43 supply, however, will be the quantities of wheat sold under Government wheat feed programs; in addition, the supply of high-protein feeds may total 7.5 million tons, compared with 5.8 million in 1941-42.

The fact is, of course, that production of feed grains this year will be below 1942-43 feeding requirements, and that the Nation's feed granary reserves must be drawn upon for the difference. This granary, carrying 500 million to 700 million bushels of reserve corn in recent years, may be drawn upon to the extent of 200 million to 300 million bushels during the coming year. This would leave a carry-over little larger than in the years prior to the creation of the Ever-Normal Granary.

Qualification, however, is that this year's corn crop is still in the making; it may be more—it may be less—than August indications. Soil moisture is good to carry the crop through maturity; biggest hurdle ahead is frost time. * * * Prices of all feeds will probably average higher this fall and winter than last.

HOGS: Big Volume

Tag end of last fall's pigs is coming to market now; hog marketings will continue seasonally small through September (but in bigger volume than last year), then the big movement of this year's spring crop will get underway and mount to a new all-time high peak of marketings next winter.

The spring crop of 62 million head was 25 percent bigger this year than last, and the volume of marketings next fall and winter will heavily tax transportation and processing facilities. Packers large and small will have all the hogs they can conveniently handle. Meanwhile, farmers are being urged to fatten early spring pigs as rapidly as possible to help prevent a market glut in early winter, and to carry late pigs beyond the December-January peak of marketings.

Of the 62 million pigs this spring, 47 million are in the Corn Belt, as compared with 38 million in this region last year. Of the Corn Belt total, 30 million are in the Western Corn Belt as compared with 24 million last year, and 17 million in the Eastern Corn

Belt as compared with 14 million last year. The number in the Western Corn Belt is little larger now than the average of predrought years 1924-33.

CATTLE: Shifts

The cattle industry is a striking illustration of the way in which this global war is changing normal patterns of agricultural production and distribution. Although the number of cattle on farms and ranches is the largest on record, it is likely that proportionately fewer of these cattle will be long-fed this fall and winter than in normal times. Shipments of stocker and feeder cattle into the Corn Belt bulked about as large during the first 6 months this year as last, but most of these cattle and the cattle to be shipped to the feed lots during the remainder of 1942 will probably be short-fed.

Meanwhile, increasing military requirements draw heavily upon range cattle in good flesh, and inspected cattle slaughter sets new high records for this time of year. Pricewise, the lower grades of slaughter cattle yield about as much as the higher grades at this time last year. BAE sees a "good outlook" for prices of range cattle to be marketed this fall; says that the general level of prices of feeder and grass-fat cattle is expected to continue substantially higher than in the last half of 1941, when prices for such cattle were the highest in over 10 years.

LAMBS: Outlook

Farms and ranches began this year with more than 49 million head of stock sheep—slightly more than at the beginning of 1941. The increase suggested the possibility of a larger lamb crop this year than last, but adverse weather intervened at shearing and lambing time, and a smaller number of lambs per 100 ewes was saved in the Western Sheep States. Net is that the 1942 lamb crop totals 32.3 million head, as compared with 32.9 million in 1941 when the crop was the largest in 18 years of Government record.

BAE reported in July that contracting of western lambs for late summer and fall delivery has been rather limited at prices averaging around \$10 to \$11 per 100 pounds for lambs in feeder condition. This is about \$1 higher than contract prices last summer, but market prices for slaughter were reported at \$3 higher. Conclusion is that price relationships are more favorable for lamb feeders this year than last.

OPA announced on August 1 maximum wholesale and retail price ceilings on lamb, for a 60-day period, at the highest prices charged during the last week in July.

DAIRYING: Increase

Dairy production continues to make good reading for us, bad for the Axis as 4.5 million dairy herds the country over break old records of output. These herds are larger this year than last, will be still larger in 1943. Milk flow in 1943 may total 125 billion pounds. This compares with 120 billion in 1942, with 115 billion in 1941. One hundred twenty-five billion pounds next year should provide adequately for military and Lend-Lease needs, and ample supplies for civilian use.

Government stores of evaporated milk and cheese are large (much of it ear-marked for Lend-Lease); major emphasis now is being put upon increased production of butter and spray process dry skim milk. A new schedule of prices on Government purchases was announced last month: Price of evaporated milk (export cases strapped) per case was dropped from \$3.20 to \$3.10, and the price of roller process dry skim milk reduced from 12 cents per pound to 11.5 cents. Price of spray process dry skim milk was increased from 13.5 cents per pound to 14 cents, price of butter (92 score at Chicago) was upped from the market price of 37½ cents to 39 cents, and price of cheese (No. 1 Wisconsin cheese exchange, per pound) from 20.25 cents to 21 cents.

Effects of these price adjustments will vary somewhat by areas, but in general and based on average conditions they are expected to increase the return to farmers producing for butter and roller skim manufactured outlets about 2 cents per hundredweight; butter and spray skim outlets about 10 cents; butter and casein outlets about 6 cents; butter and animal feed powder outlets about 6 cents; cheese outlets about 8 cents; evaporated a decline of about 10 cents, provided there is no change in manufacturer margins.

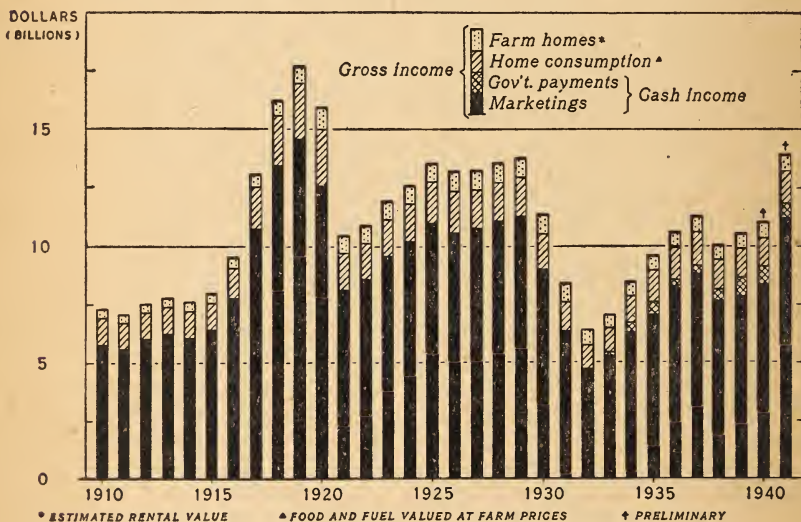
POULTRY: Flocks

Farmers are expanding laying flocks, making ready for the seasonal rise in production of eggs next fall in anticipation of continued good markets. By January 1 next the total number of

layers on farms will likely be 5 to 10 percent larger than on January 1 last. This means larger egg production in 1943, but probably by a smaller quantity than in 1942 over 1941. Big factor, of course, will be feed costs in relation to egg prices; another, the availability of production facilities.

Meanwhile, farm marketings of chickens are topping—and at higher prices—last year's volume. Both consumer demand and storage demand are strong. Output of chicks by commercial hatcheries was 7 percent smaller this June than last, and the number of eggs set in June was 21 percent smaller than the total for June last year. But advance orders for chicks in broiler areas were considerably larger this July 1 than last. Farm production of eggs totaled 29 billion during the first 6 months of 1942 compared with 25 billion during the first half of 1941.

GROSS AND CASH FARM INCOME, UNITED STATES, 1910-41



Sharp advances in prices of most farm products, with some increase in production, raised gross farm income in 1941 to the highest level since 1920. Higher prices increased moderately the value of food, rent, and fuel which the farm provides for family living. Government payments were smaller than in 1940, but the sharp advances in prices of products resulted in a marked increase in cash income. Gross income in 1942 may be close to the all-time high of 17.7 billion dollars in 1919.

FATS, OILS: Record

Evidence accumulates of high record domestic production of fats and oils this year and next. Even so, reserves will be heavily drawn upon if civilian consumption is to be maintained at the high volume of recent years, after meeting requirements for Lend-Lease export and military uses. In short, the increased domestic production this year does not offset entirely our reduced imports and increased exports.

Production of lard is expected to total 2,650 million pounds this year, or about 350 million pounds more than in 1941. Production could be pushed up an additional 100 million pounds by a larger "take-off" of fat. Production in 1943 should exceed 3,000 million pounds and set an all-time high record for this country. But more than 1 billion pounds of lard will be required for Lend-Lease alone in 1942-43.

Big crops of soybeans, peanuts and flaxseed promise to yield a record domestic production of vegetable oils. Adding cottonseed oil, the crush from this year's oil crops is expected to total 3,750 million pounds, against 2,600 million from the 1941 oil crops. * * * On still another sector, the yield of inedible tallow and greases is expected to set a high mark of 2.0 billion pounds this year, as contrasted with 1.5 billion in 1941.

COTTON: Increase

Cotton growers have 24 million acres in cultivation this year, compared with 23 million in 1941. Acreage is larger in all States except Georgia, Alabama, and Florida, where considerable acreages normally planted to cotton have been planted to peanuts instead. With average abandonment this year, the cotton area for harvest will total 23.5 million acres as contrasted with 22.2 million in 1941. Crop forecast is 13 million bales compared with 11 million bales in 1941. * * * Meanwhile, cotton, consumption continues to in-

crease in response to wartime needs for goods, the total during 1941-42 exceeding 11 million bales. Consumption in 1942-43 may total 12 million bales. Carry-over is smaller this year than last.

WINTER LEGUMES: Seeding

With twice the 1941 supply of the principal winter legume seed in prospect for this year, the Department of Agriculture urges farmers in Southern and Middle Atlantic States to increase seedings of winter legumes this fall as a means of maintaining the productive strength of their farmlands for war production. The seedings are needed to replace applications of nitrogen fertilizer that will be reduced this year because large quantities of nitrates are being used in munitions manufacture. Growing of winter legumes—mainly vetches and winter peas—is recognized as one of the best methods of restoring productive vigor to the soil. For the seeding of winter legumes, cooperating farmers can earn AAA payments which practically cover the cost of the seed.

FRUITS: Good Crops

Fruit crops may bulk a little smaller this year than last, but the Crop Board said last month that no exceedingly short crops are in prospect except possibly of California dried prunes. Indicated production of peaches, pears, grapes, cherries, and California plums was above average, but short of last year's large production with the exception of cherries and California plums. The apricot crop, and the combined production of plums and prunes in the Northwest will be larger this season than last, but smaller than average. The condition of commercial apples was the same this July 1 as last, but above average. Oranges and grapefruit were in better condition this July 1 than last.

Department of Agriculture announced higher prices to West Coast producers selling natural condition

dried apricots and pears to the Agricultural Marketing Administration. Average for dried apricots is \$380 per ton; dried pears, \$260 per ton. These averages are about \$40 per ton for each fruit over prices announced June 20.

VEGETABLES: Increase

Total acreage of all vegetables for fresh market is little larger this year than last, but yields to date have been exceptionally good, and total volume of outturn has been considerably larger than in 1941. Prices of fresh vegetables have been higher this

summer than last, and will likely continue higher except for crops in especially abundant supply—such as snap beans, onions, and tomatoes.

The 1942 canned pack of major vegetables will be the largest on record, and unusually large quantities of vegetables will be frozen-packed this year. The quantities of vegetables being dehydrated is limited only by the capacity of drying plants. Dehydrated foods being bought in increasing quantities for military use and Lend-Lease export include fruits, vegetables, soup, eggs, milk, meat.

FRANK GEORGE.

The Wealth of India

INDIA is a subcontinent of Asia, shaped like a battered triangle, the northern part entirely landlocked and the southern bounded on the west and east by the Indian Ocean and the Bay of Bengal, respectively. The base of the triangle stretches eastward from the Iranian border to the western frontier of Burma, over which the Japanese now stand guard. From north to south, India is 2,000 miles long and from east to west 2,500 miles wide. The total area is estimated at 1,578,000 square miles.

Into this area, which is about half the size of the United States, there is crowded a population estimated in 1941 at 389 millions. It is a fast-growing population, as indicated by an increase of some 60 millions in the past two decades. In any evaluation of the material wealth of India the population factor is of great importance. A mere enumeration of the country's wealth in terms of agricultural and mineral resources makes for very impressive reading, but it is considerably less so when the resources are related to the needs of so huge a population.

THE wealth of India is essentially agricultural. Much has been said in recent years about the industrialization of India, but the fact is that now—more so than in the past—the country is predominantly rural. It has been estimated that agriculture provides, directly or indirectly, the livelihood of 89 percent of the people. The remainder derive their income from industry, which has failed to absorb any of the excess agricultural population. Indeed, the proportion of farm population to the total increased from 61 in 1891 to 73 in 1931. This is the reverse of the process taking place in the Western World and in the economically more progressive countries of the East, and it thereby underlines the importance of agriculture in India's economy.

The agricultural resources of India consist of some 320 million acres of cultivated land. Inasmuch as the problem of securing adequate food supplies for India's 400 millions is the most significant, four-fifths, or 250 million acres, of all the cultivated land is under food crops; the remainder is devoted to industrial or cash crops.

RICE is the most essential food crop of India. The diet of approximately 70 percent of the population consists mainly of rice. India has the world's largest acreage under rice (72 million acres) and is second only to China as a rice producer (57 billion pounds). These figures are formidable indeed, but it must be noted that in the past two decades output actually declined by 8 percent as against an 18 percent rise in population. The decline in output is caused by stationary or slowly declining yields. The average yield per acre in the past two decades ranged from 29 bushels (1922-26) to 26 bushels (1937-41) as against 68 and 75 bushels in Japan. India, therefore, does not produce enough rice to satisfy its requirements, and the per capita consumption has declined from 205 to 162 pounds. Even on this basis of reduced consumption India must import from 6 to 8 percent of its total rice supply from Burma. With the Japanese occupation of Burma, India's rice-supply situation has been weakened still further.

Wheat is India's second important crop, the area averaging 35 million acres and output about 375 million bushels. As in the case of rice, in recent years there has been little increase in acreage and output of wheat. The per capita consumption (60 pounds) has remained practically unchanged, but mainly through diversion of what was formerly an exportable surplus into domestic channels of consumption.

In addition to the two premier crops, India is a large producer of a variety of millets (more than 60 million acres), barley, corn, and legumes. India is the world's greatest sugarcane producer. There are nearly 4 million acres under sugarcane, with an output of 5 million tons of sugar, but of low quality. In terms of volume, India is the world's largest tobacco producer, with 1,497,000 acres growing 1,375 million pounds.

ANOTHER important source of India's agricultural wealth is its livestock which, including sheep and goats, is estimated at 310 million head. Because of the many and indispensable functions assigned to livestock by Indian peasants—"the cow and the bullock have on their patient back the whole structure of Indian agriculture"—their economy is dependent upon the quality of this livestock. The fact is, however, that the livestock is of a poor quality indeed; it is small-sized, inefficient, and subject to many contagious diseases. The gradual expansion of the cultivated area at the expense of pastures in the congested areas of India has adversely affected animal husbandry. It is contended that the fodder available in India is sufficient for only two-fifths of the livestock. The large number of livestock in India places the country in the position of the world's leading producer of hides and skins, both raw and half tanned. The output is estimated at 20 million cattle and almost 6 million buffalo hides, 28 million goat and kid skins, and 19 million sheep and lamb skins.

India is one of the largest producers of oilseeds, oil cakes, and oils, having planted an area of 23 million acres under a variety of oil-bearing seeds. Chief among these is a yearly output of 3 million tons of peanuts, and a yearly output of 340,000 tons of peanut oil. Linseed, castor-beans, rapeseed and sesamum are the other important oilseeds. Approximately a million tons of oil extracted from these seeds is exported. India is perhaps the original home of the cotton plant and has been for many years the second largest cotton producer, with an output of 4.5 million bales per year. Despite attempts to develop substitute materials, jute continues to be the cheapest packing cloth in the world. In this field India enjoys the virtual monopoly, based on an annual output of 9 million bales.

DESPITE the agricultural character of India, it differs considerably from such agricultural countries as the Netherlands Indies and Malaya. This is because of India's variety of mineral resources, not possessed by the other two countries. India represents a vast potential industrial area, with an abundant labor supply and unlimited market; but these very factors, associated with low spendable income, inefficiency of labor, lack of capital, and former reluctance on the part of the colonial administration to encourage heavy industries, have so far handicapped the country's industrial development. Yet India has large resources upon which industrialization could feed itself, once the handicaps are lessened or eliminated altogether.

India's mineral resources include enormous easily accessible supplies of high-grade iron ore. The reserves are estimated at 3 billion tons, and the iron content of the ore averages 64 percent. Coal, coking coal, and manganese—all basic materials in iron and steel making—are available in abundance. Estimates of the coal resources vary from 36 to 60 billion tons, of which 5 billion tons is of good quality and easily workable. After Russia, India is the largest producer (over 1 million tons) of high-grade manganese. The country is the world's largest producer of mica, the other chief producers being the United States and Canada. India's proportion, by value, of the total output of these three countries is over 80 percent. India is one of the world's important producers of chromite, an essential mineral used in the manufacture of stainless steel and of chromesteel for armor plate for warships. Bauxite deposits of considerable extent and of good quality for the manufacture of aluminum, as well as large potential hydroelectric power, must be added to the non-agricultural resources of India.

BY far the greater part of the mineral wealth of India is yet in the making. There is altogether too great a gap between the mineral resources of India and their actual utilization. With few exceptions, notably that of the cotton-textile industry, India's industrial development has proceeded at an extremely slow pace. In 1934-38 India mined only 24 million tons of coal annually, 2½ million tons of iron ore, 339,000 tons of copper ore, and 8,000 tons of bauxite, while the value of the entire mineral output averaged 65 million dollars. Even under the stimulus of war production India's output of finished steel in 1941 amounted to only 1,250,000 tons.

It is unquestionable, however, that the enormous wartime demands that rise daily have created an urgent need for intensified industrial development of India. It involves also a basic and positive change in the attitude of Great Britain regarding a rapid industrialization of India. This, in conjunction with the material and technical aid received from the United States, may find India in a position to translate at an accelerated rate the country's potential resources into actual wealth.

Such a development is all the more important because not all is well with India's agriculture, now its principal source of wealth. The fact cannot be overlooked that the 320 million acres of cultivated land do not provide all the people with a quantity—let alone quality—of food necessary to meet the minimum requirements of the unpretentious diet prevailing in the Far East or southeastern Asia.

THERE is nothing inherent in an Indian peasant that prevents him from becoming an efficient producer of food and other farm products and from realizing all the benefits that follow. But the institutional milieu within which the peasant lives and works militates against such changes. Lack

of education, very limited application of agricultural science, and a land-tenure system that burdens tens of millions of Indian peasants, inheritance laws that result in fragmentation of holdings and, what is perhaps most important, a rapid increase in population pressing ever harder against the available resources—all these combine to make output low, both per unit of land and per man. The net result is not enough agricultural wealth to go around, which in practice spells widespread poverty and disease.

No progress in agriculture or in industrialization can appreciably increase the wealth of the people if the growth of population in India continues at the

rate of the past two decades, nullifying whatever material advantage is gained. It is well to remember in this connection the conclusion reached by the Royal Commission on Agriculture in India that everything "which we have advocated for the material advancement of the people will merely postpone the effects of the growing pressure of the population on the soil. No lasting improvement in the standard of living of the great mass of the population can possibly be attained if every enhancement in the purchasing power of the cultivator is to be followed by a proportionate increase of the population."

W. LADEJINSKY,
Office of Foreign Agricultural Relations.

Ready For Income Tax Returns?

MORE farm people than ever before will be filing Federal income tax returns in March 1943. Total farm income in 1942 is heading for a new high, and personal exemptions are likely to be lower than those in effect last year. Many farmers must expect to file a return even though they have no taxable net income. An income tax return calls for provable statements of facts. Supporting evidence may take a number of forms, including bills of sale, receipts for expenditures, and memoranda of receipts and expenses.

The basic principles to be followed in computing taxable net income are fairly simple, although in individual cases there may be complications. The easiest way to meet the requirements is to have a written record of business dealings as they occurred, including amounts received from sales and services, and amounts paid out. The content is far more important than the form. For farmers who have not "kept books," but who expect to have enough income to require reporting, now is not too soon to start developing a record for use next winter.

FARMERS who have kept no formal books and who are reporting for the first time must report on a "cash" basis. They must report actual receipts and expenses in cash for the farm business. In addition, they must develop a depreciation plan covering farm buildings, improvements, equipment, and other items representing capital investment.

"Income" means *all cash* received during the calendar year plus the cash equivalent of anything received in exchange for farm products. In case of question, the best evidence is a chronological record of receipts, especially if supported by statements such as come with milk or egg checks, and the like. Memory alone is usually a poor basis for an accurate report. Starting in midseason, bank deposit slips, bank passbooks or statements, sales returns, acknowledgments of deliveries, in fact almost anything authentic will help in fixing the amount of income for the earlier part of the year. In the case of receipts from sale of produce or animals *raised*, the entire amount is treated as income. In the case of receipts from the sale

of produce or animals previously *bought*, only the difference between the purchase price and the sale price is part of the gross income regardless of how long they were kept on the farm. Receipts from sales of cordwood, posts, lumber, gravel, Government payments, and the like, are also part of the gross farm income.

IN general, a farmer is entitled to deduct as necessary expenses from gross income all amounts actually expended in carrying on the business, except those which represent capital investment. Here again the only practical way to be sure of the amount and nature of expenses is to set them down in writing as they occur. Receipted bills and canceled checks can be used to substantiate the amounts.

Since the farm business and the daily life of the farm family are closely related, it often is difficult to say which expenses are fully farm, which are fully personal, and how those which are both should be divided. The division often may have to be arbitrary, but it must be reasonable and consistent with the facts. In a few cases the division is of little practical significance. For example, property taxes levied against all the farm property except the dwelling are deductible from the farm *business* income as expense, whereas taxes levied against the dwelling are deductible from the *personal* gross income. Interest paid on mortgage and other debt is deductible, either as a business expense or as a personal deduction, depending on the circumstances. Automobile expense is deductible from gross farm income only in proportion to the use of the automobile in the farm business. Other items can be treated as business or as personal expense to the extent that the facts warrant.

THE allowable deduction for depreciation of farm buildings (except dwelling), improvements, machinery and equipment, work stock,

and breeding stock is the item likely to cause greatest confusion. The allowance for depreciation permits a deduction annually (as an expense) of a sum sufficient to cover the value used up in the productive process that year. Consider for example a machine that cost \$110 new, estimated to have a useful life of 10 years and a scrap value of \$10. The value to be used up over 10 years may be divided in several ways, but in the absence of a compelling reason for some other distribution, \$10 a year for 10 years is considered most satisfactory to most people. Every durable item of capital equipment is set up in similar fashion. The amount claimed can be adjusted as facts indicate; but the total may not in any case exceed the cost less salvage value, no matter how long a machine may stay in use.

Computing the depreciation allowance for a farm business requires a list of depreciable property with information as to the date of acquisition, cost, depreciated value at beginning of year, estimated useful life remaining, and estimated scrap value. Once prepared, the list of property is continued year after year by removing items disposed of or scrapped and by adding newly acquired items.

The gross farm income less expenses paid out and depreciation allowed represents the "net farm profit." This is one item of the farmer's personal income. Personal net income is arrived at by adding other personal income such as nonfarm earnings and interest received, and then deducting such items as contributions and personal taxes and interest paid. All this must be shown on the return filed.

Besides its value in preparing an income tax return, the keeping of records is useful in analyzing the financial results of farm operations. Business judgment developed by using farm business records has helped to increase the income of many farmers.

GERHARD J. ISAAC.
S. W. MENDUM.

National Food Supply

TOTAL food production in 1942 is setting an all-time high record—about 9 percent more than in 1941, and 25 percent larger than the average for the five years 1935–39. BAE reported this month larger food grain crops in prospect this year than last. Truck crops and sugar crops are substantially larger this year than in 1941. Most of the increase in food production this year over last is in truck crops, sugar crops, meat animals, and live-stock products.

Our food requirements also are considerably larger this year than last—for civilian and military use, and Lend-Lease export. Men-at-arms require more food than civilians, and as among civilians the men engaged in manual production require more than do office workers. Records show too that food consumption increases as the size of the pocketbook increases; many pocketbooks are larger this year than last.

Altogether, the BAE sums up that while the increased production of food this year assures an over-all supply for civilian consumption about as large as in 1941, the supplies of some foods may

be smaller by reason of the extraordinary wartime requirements for the military and Lend-Lease. But there are offsets.

Civilian supplies of canned fruits and vegetables are smaller this year than last, but there are larger supplies of homegrown and commercial fresh vegetables, and considerably larger quantities of vegetables are being home-packed. * * * Increased production of dairy products this year is calculated to meet wartime requirements and normal civilian needs, and supplies of eggs are being maintained by means of the largest total output on record.

Altogether, the Bureau says that per capita civilian consumption of cereals, lamb and mutton, poultry, dairy products, and most fresh vegetables may be as large or larger in 1942 than in 1941. But that the per capita consumption of sugar, fresh fruits, canned and dried fruits, beef, pork, and lard may be smaller. Per capita consumption of edible fats and oils (with the possible exception of lard) may be as large as in 1941.

F. G.

Our Changing Food Consumption¹

THE average annual consumption of food over the last three decades has been remarkably stable with relatively small variations as between years in terms of the total. In the accompanying table, the total is expressed in terms of total weight of food moving through the retail market or its equivalent, but substantially the same conclusions would be reached if the total were expressed in terms of calories or other nutritional measures such as vitamin or mineral content.

¹ Excerpts from address by Oris V. Wells, Bureau of Agricultural Economics, before the American Home Economics Association, Boston, Mass., June 23, 1942.

There has been a down trend in the consumption of potatoes and cereal products—especially flour and cornmeal. The consumption of wheat flour dropped 24 pounds or about 12 percent between 1916–17 and 1918–19, failed to show any significant increase following World War I, again declined during the period 1930 to 1935, and at the present time is only about 75 percent of what it was prior to World War I. The consumption of cornmeal has also been declining, and at present is only about 40 percent of what it was during 1909–16. Our data also indicate that there is a slow down trend in the consumption of potatoes, with

current consumption down to about 80 percent of the level which existed prior to World War I.

The consumption of sugar increased about 20 pounds or 25 percent between 1920 and 1925 and then continued at 100 pounds or more per capita through 1941. This increase in sugar consumption has often been interpreted as an offsetting shift to the decrease in cereal and potato consumption and also reflects the result of rising incomes and the maintenance of standards of living at a very high level following World War I.

THE consumption of meat and eggs has remained stable, while some increase in the consumption of beans, peas, and nuts is indicated. True, the per capita consumption of eggs and meat, including poultry and fish, has fluctuated some as between the several periods, but there is no significant

trend. Such data as are available indicate that the consumption of dry field beans increased from 6.2 pounds per capita in 1909-16 to 8.8 pounds per capita in 1937-41.

A steady increase is indicated for the consumption of the manufactured dairy products—condensed and evaporated milk, cheese, and ice cream—from 1909-16, with some increase in the consumption of fluid milk and cream following World War I, and a further slight increase in 1927-31 as compared with 1922-26, and again in 1937-40 as compared with 1932-36. Butter consumption has remained stable, with the 1932-41 average almost identical with the per capita consumption for 1909-16.

The consumption of fresh fruit has remained stable, but with a considerable shift away from apples to citrus fruit. The consumption of apples is currently running at about 65 percent,

Estimated Average Annual Per Capita Consumption of Food in the United States, 1909-41¹

Item	1909-16	1917-21	1922-26	1927-31	1932-36	1937-41
Dairy products:	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Fluid milk and cream ²	248.8	249.6	264.4	272.8	269.0	274.2
Evaporated milk, cheese, ice cream.....	13.9	19.9	22.8	25.1	25.6	33.6
Meats, poultry, fish ³	142.8	135.6	139.8	131.7	131.4	136.5
Eggs.....	37.2	35.7	39.5	40.9	35.5	37.7
Potatoes, including sweet potatoes.....	187.0	170.4	163.9	156.7	156.8	146.9
Beans, peas, and nuts.....	11.2	13.1	12.0	14.1	15.0	16.0
Fresh fruit:						
Citrus.....	18.2	20.8	27.2	32.3	37.2	54.3
Other.....	156.0	139.4	140.9	144.4	132.6	144.1
Dried fruit.....	4.2	5.9	6.0	5.7	5.5	6.2
Canned fruit.....	4.2	7.9	9.2	13.0	12.5	17.2
Fresh vegetables: ⁴						
Tomatoes.....			13.8	13.8	14.7	17.2
Leafy, green, and yellow.....			51.7	57.6	60.8	69.5
Other.....			36.1	40.1	41.0	47.8
Canned vegetables.....	13.0	13.4	16.0	18.9	17.9	23.2
Cereal products:						
Wheat flour.....	206.4	180.1	176.0	173.4	156.6	154.0
Other ⁵	77.1	55.6	51.3	49.4	43.3	42.1
Sugar and sirup ⁶	91.0	95.8	115.9	114.4	107.9	113.7
Butter and fats:						
Butter.....	17.4	15.2	17.9	17.7	17.7	17.0
Other ⁷	43.4	43.5	45.5	46.7	44.8	48.4
Coffee, tea, chocolate, and spices.....	13.2	16.6	16.7	17.4	18.4	21.2
Total⁸.....	1,385.0	1,318.5	1,366.6	1,386.1	1,344.2	1,420.8

¹ Consumption in terms of estimated weight available for sale in the retail market calculated from statistics of stocks, production, foreign trade, and estimated wastes between the farm and retail market.

² Calculated by taking 80 percent of estimated consumption of whole milk and cream in terms of whole milk.

³ Excluding bacon and salt pork and including an allowance of 14 pounds per capita for fish, 1909-41.

⁴ Consumption per urban inhabitant, since farm-garden production not estimated.

⁵ Buckwheat and rye flour, breakfast cereals, and cornmeal.

⁶ Chiefly cane and beet sugar, with sirup and other sugars accounting for about 13 pounds per capita, 1909-41.

⁷ Salad dressing, margarine, vegetable oil cooking compounds, bacon and salt pork, and lard.

⁸ Simple sum of items without correction for some duplication between sugar and ice cream and canned fruit.

and the consumption of citrus fruit at about 300 percent, of the level which existed prior to World War I.

THE consumption of vegetables has been increasing during the last two decades, with some slight shift toward the consumption of leafy, green, and yellow vegetables and tomatoes, which has increased about one-half since 1922-26. Such data as we have indicate that the consumption of vegetables was relatively steady from around 1905 through 1925, and that the shifts since then have been in line with the educational recommendations that have been developed from a nutritional standpoint.

An analysis of supplementary data as well as general observation indi-

cates that there has been a marked drift toward types of food and methods of distribution which lessen "the struggle" of food preparation. That is, there has been a steady increase in the packaging of food and the services which grocers and others render in the form of cutting, trimming, slicing, and freezing before actually turning the food over to the consumer. I think this is significant not only in its effect upon the amount of time and effort required in the final preparation of the food in the home, but also in its effect upon the increase in the margin between prices received by farmers and prices paid by consumers during and following World War I and in relation to some of the economies which we may be forced to during World War II.

Big Packs of Canned Foods

NEW high records are being made this year in the production of many canned fruits and vegetables. More than 40 million cases of tomatoes and 38 million cases of peas—commodities especially sought as part of the Food-for-Freedom program—will be packed. Big figures are shown also for sweet corn (nearly 27 million cases), tomato juice (27 million cases), green beans (15 million cases), grapefruit juice (14.5 million cases), and peaches (15 million cases). Large commercial packs of fruits and vegetables processed and preserved in other ways—in paper and in glass—are being made.

Probability is that home canning will contribute much to the supply of processed food this year, especially of vegetables glassed from victory gardens. Big packs of small fruits will be put up in homes to the limit of supplies of containers and sugar. The output of farm gardens will bulk larger this year than ever before, making available large quantities of vegetables for home consumption, and a surplus for home canning. These home supplies

should go far toward making available larger supplies of commercial foods for military and Lend-Lease use, and toward cutting less drastically into

Canned Vegetables: Packs of 1940 and 1941, and Estimated 1942

Commodity	1940	1941	Estimated 1942 ¹
	1,000 cases of 24/2's	1,000 cases of 24/2's	1,000 cases of 24/2's
Primary:			
Asparagus.....	3, 256	3, 205	4, 200
Beans, green.....	8, 529	11, 673	14, 700
Beans, wax.....	1, 269	1, 689	2, 100
Beans, lima.....	1, 992	2, 387	2, 700
Corn.....	15, 524	26, 109	26, 900
Peas.....	25, 196	28, 724	38, 400
Tomatoes.....	29, 533	31, 759	10, 300
Tomato catsup, paste, and sauce ¹	6, 136	6, 384	6, 800
Vegetable purees ¹	4, 500	5, 500	5, 500
Secondary:			
Beets.....	8, 719	7, 365	5, 578
Carrots.....	1, 435	2, 058	2, 152
Pimientos.....	465	400	232
Pumpkin and squash.....	3, 090	3, 391	2, 657
Spinach.....	4, 980	4, 946	7, 868
7 others (carrots and peas, greens, kraut, okra, soups, succotash, and mixed vegetables) ²	39, 150	44, 950	33, 301

¹ Estimates subject to change as crop prospects change.

² Estimates of National Canners Association, in actual cases (catsup only in No. 10 tins).

commercial packs for civilian consumption.

THE supply of principal canned fruits and vegetables for civilian use will be smaller this year than last, but larger than pre-war totals. Some fruits and vegetables will not be canned at all this season, but processed in other ways, in an effort to conserve available supplies of tin. The latter-named group includes baked beans, kidney beans, corn on the cob, hominy, kraut juice, rhubarb, mushrooms, apple butter, dried prunes, and some of the fruit juices. As for foods canned, an estimated production of 198 million cases of vegetables (including soups) to be packed this year compares with 200 million in 1937; 107 million cases of fruits and fruit juices compares with 82 million in 1937; 85 million cases of evaporated and condensed milk compares with 45 million cases; 2 billion pounds of meat products compares with 540 million in 1937; and 23 million cases of fish compares with 19 million cases.

Production of dried fruits will be larger this year than last, but smaller quantities will be available for civilian consumption as a result of large Government purchases. Large quantities of dried vegetables—beans, peas, onions, potatoes, and cabbage—also are being bought by the Federal Government; nevertheless, the supply of dried beans and peas for civilian use should be fairly large. The frosted foods industry expects to turn out record packs of many of the standard fruits, vegetables, and other foods this season.

The Bureau of Agricultural Economics issued preliminary estimates last month totaling 2 million acres of commercial truck crops for processing this year, as compared with 1.6 million

Canned Fruits: Packs of 1940 and 1941, and Estimated 1942

Commodity	1940	1941	1942 estimated ¹
	1,000 cases of 24/2½'s	1,000 cases of 24/2½'s	1,000 cases of 24/2½'s
Primary:			
Fruit cocktail.....	4,861	5,107	5,250
Fruit salad.....	601	634	750
Peaches (excluding California freestone).....	10,191	12,316	14,000
Pears.....	5,518	6,557	7,000
Fruit puree ²	950	1,200	1,200
Secondary:			
Apples.....	2,058	3,990	3,088
Apple sauce.....	2,002	3,219	3,187
Apricots.....	2,197	4,257	2,500
Berries:			
Blackberries.....	359	663	359
Blueberries.....	264	481	264
Cranberries.....	1,993	2,593	1,993
Loganberries.....	62	51	62
Raspberries, black.....	144	190	144
Raspberries, red.....	170	149	170
Strawberries.....	140	99	140
Other berries.....	176	172	176
Cherries, R. S. P.....	2,712	1,707	3,905
Cherries, sweet.....	595	867	893
Citrus salad.....	228	207	207
Grapefruit.....	2,955	2,254	2,000
Peaches, California freestone.....	1,134	2,154	1,071
Plums.....	98	332	49
Prunes.....	1,235	2,012	927

¹ Estimates subject to change as crop prospects change.

² Estimates of National Cannery Association, in actual cases.

Canned Fruit Juices: Packs of 1940 and 1941, and Estimated 1942

Commodity	1940	1941	Estimated 1942 ¹
	1,000 cases of 24/2½'s	1,000 cases of 24/2½'s	1,000 cases of 24/2½'s
Secondary:			
Grapefruit.....	11,600	8,000	14,500
Lemon.....	294	250	147
Orange.....	2,825	2,000	3,531
Blended citrus.....	1,751	1,725	2,189
Fruit nectars.....	1,500	1,650	1,650

¹ Estimates subject to change as crop prospects change.

acres harvested in 1941. These crops include asparagus, lima beans, snap beans, beets, cabbage for kraut, sweet corn, cucumbers for pickles, green peas, pimientos, spinach, and tomatoes.

MAURY NEEDHAM.

Buy War Bonds

SUPPLEMENTAL SWEETS

Supplemental sweetenings are important elements in our sugar supply, equal last year to 1 million tons of raw sugar. Production should be larger this year—possibly 30 percent more—in view of the tight sugar situation and other incentives to greater output of corn sirup and corn sugar, cane sirup, sargo sirup, honey, and maple sirup. The production of sweetenings is a third of the output of all sugar and sweetenings combined in the continental United States.

* * *

Principal sweetenings are corn sirup and corn sugar. Production of corn sirup has been forecast at 150 million gallons for 1942, compared with 109 million in 1941; corn sugar at 750 million pounds compared with 667 million pounds. Before the war, more than half the corn sirup went into confections; a fourth into mixed sirups for pancakes, hot biscuits and the like; most of the remainder into bakery products and beer. Much prewar corn sugar went into non-foods (tanning, rayon industries)—about 40 percent then, only 20 percent now. In 1937, bakeries consumed 23 percent, breweries 19 percent, confectioners 6 percent of the corn sugar. Corn sugar and sirup are produced all year around, as required.

* * *

Honey production slumped in the 1930's because of low prices and drouth; is now back to 1920 figures, climbing from 13 million gallons average in 1934-37 to 17 million in 1940-41 and 21 million estimated for 1942. Prices have risen sharply the last two years. Nearly all honey is used for food. It makes a good sweetener for iced tea if added when tea is hot, later chilled. Production reaches peak when spring flowers bloom, and the bloom was profuse this year.

* * *

Production of cane sirup, sorgo sirup, and edible molasses reaches a yearly

high point after fall harvest of the cane and sorghum crops. Cane sirup available in 1942 is indicated at 18.4 million gallons, up from 13.4 million in 1941. Production centers in the lowlands of the South Atlantic and Gulf coast States. Most of the production is in small quantities, except for commercial production in Louisiana and Georgia which is shipped in tank cars to manufacturers who mix it with other sirups and sell under their own trade names.

Sorgo sirup comes from highlands of States flanking the lower Mississippi River, southeastern United States and Texas. Supply for 1942 at 11.7 million gallons is up from 11.3 million last year. Edible molasses, chiefly a by-product of Louisiana sugar-cane, is estimated at 5.4 million gallons this year—double the supply for 1941. The molasses is used as sirup and in recipes for spice cakes, gingerbreads and the like.

* * *

Maple sirup production is estimated at 2.9 million gallons this year, 2.0 million last year; maple sugar production at 657 thousand pounds this year, 387 thousand last year. Most production is in New England and States bordering Great Lakes. Trees are tapped in late winter, early spring when sap begins to rise. Sap is then boiled down into sirup and sugar. The sugar is used to give a maple flavor to candy, ice cream, bakery and other products, and to some extent in the tobacco industry. Tobacco manufacturers also import considerable quantities from Canada.

Homemakers can get many good recipes using supplemental sugars, sirups and molasses from State, Federal home economists. All told, however, production of these sweetenings probably will be only 288 thousand tons greater than last year—equivalent to only a tenth of the expected reduction of 2.5 million tons in consumption of cane and beet sugar.

—FRANKLIN THACKREY

FARM INCOME

Cash income from farm marketings in 1941 (revised to incorporate more complete data on sales of livestock and livestock products) totaled 11,244 million dollars—2,865 million more than in 1940. A similar increase this year would bring the total within 500 million of the all-time high of 14,602 million in 1919. Government payments in 1941 totaled 586 million dollars—180 million less than in 1940. Possibility is that cash income from marketings plus Government payments in 1942 will set a new high record of cash income.

Added to cash income in 1941 is 1,421 million dollars representing the value (at farm prices) of food and fuel retained on farms where grown, and 706 million as the rental value of farm dwellings. Comparable figures for 1940 are 1,233 million for food and fuel, and 665 million as rental value. Gross income (cash from marketings, Government payments, food and fuel and rental value) was 13,957 million dollars in 1941, compared with 11,043 million in 1940. Largest gross on record was 17,710 million in 1919; smallest in the last 32 years was 6,406 in 1932.

Gross Farm Income, United States, 1910-41¹

Year	Cash income from marketings	Government payments	Total cash income	Value of home consumption	Rental value of dwellings	Gross income
	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.
1910	5,793	—	5,793	1,177	382	7,352
1911	5,596	—	5,596	1,092	393	7,081
1912	6,017	—	6,017	1,140	404	7,561
1913	6,248	—	6,248	1,153	420	7,821
1914	6,050	—	6,050	1,161	427	7,638
1915	6,403	—	6,403	1,131	434	7,968
1916	7,750	—	7,750	1,309	473	9,532
1917	10,746	—	10,746	1,861	540	13,147
1918	13,461	—	13,461	2,153	618	16,232
1919	14,602	—	14,602	2,395	713	17,710
1920	12,608	—	12,608	2,406	894	15,908
1921	8,150	—	8,150	1,568	760	10,478
1922	8,594	—	8,594	1,555	734	10,883
1923	9,563	—	9,563	1,623	781	11,967
1924	10,221	—	10,221	1,622	780	12,623
1925	10,995	—	10,995	1,781	791	13,567
1926	10,564	—	10,564	1,837	803	13,204
1927	10,756	—	10,756	1,695	800	13,251
1928	11,072	—	11,072	1,667	811	13,550
1929	11,296	—	11,296	1,699	829	13,824
1930	9,021	—	9,021	1,537	830	11,388
1931	6,371	—	6,371	1,253	754	8,378
1932	4,743	—	4,743	1,008	655	6,406
1933	5,314	131	5,445	1,023	587	7,055
1934	6,334	446	6,780	1,090	616	8,486
1935	7,086	573	7,659	1,320	616	9,595
1936	8,367	287	8,654	1,374	615	10,643
1937	8,850	367	9,217	1,410	648	11,275
1938	7,686	482	8,168	1,283	632	10,083
1939	7,877	807	8,684	1,244	636	10,564
1940 ²	8,379	766	9,145	1,233	665	11,043
1941 ²	11,244	586	11,830	1,421	706	13,957

¹ Cash income and value of home consumption of livestock and livestock products have been revised from 1935 to 1939 following the release of 1940 agricultural census enumerations of livestock. Similar revisions in income from crops have not yet been made for this period.

² Preliminary.

New Uses for Cotton

IF THE cotton industry is to hold its position in the future as a major industry, scientific research must be intensive in several major fields. There is need for three lines of research on lint cotton: (1) On the chemical and physical properties of the individual fibers. (2) On the mechanical processing of cotton and its manufacture into various products, and (3) on chemical finishes for cotton products. Most cotton products in use today were developed through trial and error.

New and improved cotton products developed as a result of research work by various organizations in many fields include an inexpensive cement shingle using cotton fabric as a reinforcing membrane, a method of making cotton pile fabrics for automobile and furniture seats, a process by which cotton webbing and resins are used to form felts for industrial use, a way of making disposable towels, wrinkle-resistant finishes, flame-proofing and waterproofing treatments to increase serviceability of cotton products.

THE Southern Regional Research Laboratory has contributed directly to the war effort in its cotton research in the development of means for cutting cotton to uniformly short lengths so it can be used with existing commercial equipment to supplement linters for making smokeless powder, and in providing a list of effective treatments for protecting sandbag fabrics from attack by soil micro-organisms.

Other laboratory cotton research objectives of importance are: plastic coated or impregnated fabrics for replacing rubberized fabrics; an unlined cotton fire hose to replace linen hose of the same type; improved mesh fab-

rics for use as a base for nonshatterable transparent plastic substitutes for window glass; and the development of cotton products to replace those made from certain imported fibers which are difficult or impossible to obtain.

Research efforts on products of cottonseed include development of adhesives for plywood, paper-coating material to supplement casein, synthetic wool-like fibers, modified cottonseed oil to replace olive oil in the textile industry and palm oil in the tinplate industry and to replace certain imported waxes.

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Parity Prices: How They Are Calculated

THE original definition of the parity principle in the Agricultural Adjustment Act of 1933 declared that it was the policy of Congress, among other things, to "reestablish prices to farmers at a level that will give agricultural commodities a purchasing power with respect to articles that farmers buy, equivalent to the purchasing power of agricultural commodities in the base period. The base period in the case of all agricultural commodities except tobacco shall be the prewar period, August 1909-July 1914. In the case of tobacco, the base period shall be the postwar period, August 1919-July 1929."

While this formula has been amended and reenacted several times since 1933, it has not been essentially changed except that provision has been made for using August 1919-July 1929 as the base period for potatoes and commodities for which satisfactory data are not available for 1909-14, and allowances for interest payments per acre on farm indebtedness secured by real estate and tax payments per acre on farm real estate have been added to the purchasing power calculations for all

commodities for which the base period is 1909-14. In addition, the base period for Burley and flue-cured tobacco has been shifted to August 1934-July 1939.

This formula defines a relationship or exchange ratio between prices paid by farmers generally and prices received. It applies only to those items which the farmer buys and for which prices and rates can be rather easily determined, and to those items which the farmer sells for which prices can also be rather easily determined. It is not a cost-of-production or standard-of-living formula except to the extent that such a ratio or exchange relationship would give farmers prices and farm families incomes that would have the same relative purchasing power when compared with nonagricultural prices and the incomes of nonfarm families as existed in the base period.

THE steps or methods used in calculating parity prices for agricultural commodities are:

1. A base price is determined. Where satisfactory data are available this is done by averaging the prices

received by farmers for the 60 months beginning August 1909 and ending July 1914. The average price of cotton during this period, for example, was 12.4 cents a pound, while corn averaged 64.2 cents a bushel and wheat averaged 88.4 cents a bushel. The base prices for tobacco and for a considerable number of fruits and vegetables are averages of the season average prices for the marketing seasons falling within the 120 months August 1919–July 1929, or the 60 months August 1934–July 1939.

2. An index of prices paid, including taxes on real estate and interest paid, is calculated. To begin with, the prices of 86 items used in family living and 88 items used in farm production are collected. These items include clothing; household supplies; food; furniture and furnishings; building materials, automobiles, trucks, tractors, gas, oil, and tires; feed; farm machinery; fertilizer, general equipment and supplies; and seed. The estimated quantity of each commodity used by farmers is used to combine these prices into a simple index, which also includes the appropriate allowances for taxes and interest. This procedure gives an over-all index of 152 for June 15, 1942, which means that farm commodity prices would need to be 152 percent of the prices prevailing in 1909–14 in order to have the same per unit purchasing power as in 1909–14.

3. The third step in calculating parity prices is to adjust the base period prices by the index of prices paid, interest, and taxes. That is, the base period prices are multiplied by 1.52 to calculate the parity prices for June 15, 1942. The parity price for cotton, for example, is 1.52 times 12.4 cents, or 18.85 cents a pound; the parity price for corn is 1.52 times 64.2 cents, or 97.6 cents a bushel; and the parity price for wheat is 1.52 times 88.4 cents, or 134.4 cents a bushel.

PARITY prices, of course, change as the index of prices paid, interest, and taxes changes—that is, parity is a

relative rather than fixed price concept. In fact, the parity index has been rising steadily since last spring. The index of prices paid, interest, and taxes was 130 for May 15, 1941, as compared with 152 for May 15, 1942, and 152 for June 15, 1942. This index, it should be noted, does not include any allowance for sums spent for farm wages; while the effect of freight rates is automatically covered by using prices paid by farmers in the local market.

For some commodities which have only recently come into general use or for which satisfactory earlier data are not available, the base period is August 1919–July 1929, or that part thereof for which satisfactory statistics are available; while for Burley and flue-cured tobacco the base period is August 1934–July 1939. Parity for these commodities is calculated in exactly the same manner as for other commodities, except that allowances for interest and taxes are not included. The index of prices paid by farmers was 95 based on August 1919–July 1929 and 122 based on August 1934–July 1939 as of June 15, 1942. Parity prices, as well as prices received by farmers, are published every month by the Department in its Midmonth Local Market Price Report.

PARITY prices are calculated in terms of prices received by farmers in the local markets in which they ordinarily sell. This means that parity prices apply to the average of all classes and grades of the commodity as sold by all farmers in the United States, except as otherwise specified. Fruits and vegetables for fresh use and for processing are usually considered as separate commodities, and special parities are sometimes calculated for commodities produced in certain areas where such commodities are covered by a marketing agreement or order program.

Where necessary, of course, average or normal differentials for different varieties, classes, or grades of a com-

modity and average or normal spreads between different markets, methods of sale, or locations can be calculated and applied to the average parity price for the Nation. These spreads or differentials, however, should not themselves be considered parities, as they will often need adjusting or recalculating due to changes in methods of processing, in marketing and transportation costs, and in the distribution of supplies relative to demand. Parity prices may also be corrected for seasonal differences, especially where there is a reasonably regular and well defined seasonal movement.

Grade and location differentials, for example, are worked out and used in connection with almost all commodity loans made by the Commodity Credit Corporation, as well as in connection with most of the price-support programs under section 4 (a) of Public, No. 147, 77th Congress. In addition, the Department has announced and regularly publishes in the Midmonth Local Market Price Report a series of parity price equivalents for the several classes of beef cattle at Chicago, and similar calculations for other commodities will be worked out and released as needed.

The published parity prices for eggs, butterfat, and wholesale milk are corrected for seasonal variation. This is done by multiplying the 1909-14 base price by the index of prices paid, including taxes and interest, and then multiplying the resulting parity price by the appropriate seasonal factor for the particular month. These factors, as well as seasonal indexes for a considerable number of other agricultural commodities, are given in the Midmonth Local Market Price Report for May 15, 1942.

THE current legal bases for calculating parity are found in section 301 of the Agricultural Adjustment Act of 1938, as amended, and sections 2 and 8 (e) of the Agricultural Marketing Agreement Act of 1937. Section 2 of the Agricultural Marketing Agree-

ment Act is in effect a reenactment or the definition of parity prices as contained in the Agricultural Adjustment Act of 1933, as amended, which is the same essential definition as used in the Agricultural Adjustment Act of 1938, as amended. Section 8 (e) of the Agricultural Marketing Agreement Act of 1937 sets forth the procedure to be used when satisfactory data cannot be obtained for the base period 1909-14.

In certain cases, the Congress has provided that "comparable prices" can be calculated, which shall in effect be substituted for the parity prices as calculated according to the regular method. This authority is contained in section 4 of Public, 147, 77th Congress. This amendment provides that the Secretary of Agriculture shall so use such funds as are available to support prices for nonbasic commodities at not less than 85 percent of the parity or comparable price therefor whenever it may be found necessary to encourage an expansion in production. Comparable prices are to be determined whenever the production or consumption of a commodity has so changed in extent or character since the base period as to result in a price out of line with parity prices for the five basic commodities, corn, cotton, tobacco, rice, and wheat.

So far, the only commodities for which comparable prices have been calculated are soybeans, peanuts for oil, and dry field peas, all of which are commodities which have come into general use since 1929. The method used in determining comparable prices for these three commodities is based upon the calculation of a series of base prices which "bear the same relation to the average base prices of corn, cotton, wheat, rice, and tobacco as the actual prices of the same commodities were to the average actual prices of these five basic commodities in the 60 months, August 1934 through July 1939."

O. V. WELLS.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 =100) ¹	Income of industrial workers (1935-39 =100) ²	Cost of living (1935-39 =100) ³	1910-14=100					Prices paid, interest, and taxes	Farm wage rates
				Wholesale prices of all commodities ⁴	Prices paid by farmers for commodities used in—					
					Living	Production	Living and production			
1925	90	126	125	151	163	147	156	170	176	
1926	96	131	126	146	162	146	155	168	179	
1927	95	128	124	139	160	144	153	166	179	
1928	99	127	123	141	160	148	155	168	179	
1929	110	134	122	139	159	147	154	167	180	
1930	91	110	119	126	150	141	146	160	167	
1931	75	85	109	107	128	123	126	140	130	
1932	58	59	98	95	108	109	108	122	96	
1933	69	61	92	96	108	108	108	118	85	
1934	75	76	96	109	122	123	122	128	95	
1935	87	87	98	117	124	127	125	130	103	
1936	103	100	99	118	123	125	124	128	111	
1937	113	117	103	126	128	136	131	134	126	
1938	89	91	101	115	122	125	123	127	125	
1939	108	105	99	113	120	122	121	125	123	
1940	123	119	100	115	121	124	122	126	126	
1941	156	163	105	127	131	131	131	134	154	
1941—July	160	173	105	130	130	129	130	133	160	
August	160	174	106	132	134	132	133	136	-----	
September	161	177	108	134	136	135	136	138	-----	
October	163	178	109	135	140	138	139	141	165	
November	166	180	110	135	142	139	141	143	-----	
December	167	187	110	137	143	141	142	143	-----	
1942—January	171	196	112	140	146	145	146	146	166	
February	172	194	113	141	147	147	147	147	-----	
March	⁵ 171	195	114	142	150	149	150	150	167	
April	⁵ 173	202	115	144	152	149	151	151	177	
May	176	208	116	144	153	150	152	152	-----	
June	180	213	116	144	154	150	152	152	183	
July					154	150	152	152	202	

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio prices received to prices paid, interest, and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals ⁵	Dairy products	Chickens and eggs	
1925	157	177	172	153	141	153	163	92
1926	131	122	138	143	147	152	159	86
1927	128	128	144	121	140	155	144	84
1928	130	152	176	159	151	158	153	89
1929	120	144	141	149	156	157	162	87
1930	100	102	162	140	134	137	129	79
1931	63	63	98	117	92	108	100	62
1932	44	47	82	102	63	83	82	53
1933	62	64	74	105	60	82	75	59
1934	93	99	100	103	68	95	89	70
1935	103	101	91	125	117	108	117	83
1936	108	100	100	111	119	119	115	89
1937	126	95	122	123	132	124	111	90
1938	74	70	73	101	114	109	108	75
1939	72	73	77	105	110	104	94	74
1940	85	81	79	114	108	113	96	78
1941	96	113	92	144	144	131	122	91
1941—July	98	121	93	⁶ 120	151	132	127	94
August	99	128	100	133	155	135	130	96
September	106	150	89	145	163	140	141	101
October	101	144	107	164	154	145	146	99
November	103	136	98	147	149	148	157	94
December	112	138	98	162	157	148	153	100
1942—January	119	143	102	204	164	148	147	102
February	121	150	98	161	173	147	135	99
March	122	151	111	136	180	144	130	97
April	120	158	118	158	190	142	131	99
May	120	159	131	152	189	143	134	100
June	116	153	148	169	191	141	137	99
July	115	155	131	200	193	144	145	101

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Bureau of Labor Statistics.

³ Adjusted for seasonal variation. Revised November 1941.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.